

CLAIMS

1. A system for use with a broadband network, the system comprising:

a data collector configured to be coupled to at least a portion of the network and

5 configured to obtain network performance metrics from network elements in the at least a portion of the network; and

a data processor configured to process the obtained metrics to yield normalized metrics by adjusting the obtained metrics, as appropriate, such that similar metric types

10 with different values obtained from disparate network elements based upon similar network performance associated with the disparate elements will be normalized to have normalized values that are similar.

2. The system of claim 1 wherein the processor is configured to adjust each of the obtained metrics depending upon device-specific information of each network

15 element.

3. The system of claim 2 wherein the device-specific information includes at least one of make, model, hardware version, software version, and element settings associated with each of the network elements.

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4. The system of claim 2 wherein the data collector is further configured to obtain at least one of MIB objects and command line interface information from the

network elements and the data processor is further configured to determine the device-specific information from the at least one of MIB objects and command line interface information.

5 5. The system of claim 1 wherein the network performance metrics are remotely-accessible standard management instrumentation.

10 6. The system of claim 5 wherein the network is a DOCSIS network and the network performance metrics include at least one of signal-to-noise ratio, power level, equalizer coefficients, settings information, error information, counter information, bandwidth, quality of service, latency, and jitter.

15 7. The system of claim 1 wherein at least one of the data collector and the data processor comprise software instructions and a computer processor configured to read and execute the software instructions.

 8. A computer program product residing on a computer-readable medium and including computer-executable instructions for causing a computer to:

 obtain network performance metrics from broadband network elements;

20 use network management instrumentation associated with the broadband network elements to determine which of multiple calibration algorithms to apply to the obtained metrics; and

normalize the obtained metrics using the determined calibration algorithm to yield normalized metrics by adjusting the obtained metrics, as appropriate, such that a first metric from a first network element and having a first value and a second metric, from a second network element and of a similar type as the first metric, and having a second value, different from the first value, yield first and second normalized metrics having similar values, if the first and second metric values are associated with similar network performance at the first and second network elements.

9. The computer program product of claim 8 wherein the network management instrumentation includes MIB objects and the instructions for causing the computer to use the network management instrumentation are for causing the computer to identify the first and second network elements using the MIB objects.

10. The computer program product of claim 9 wherein the instructions for causing the computer to identify the first and second network elements cause the computer to determine at least one of make, model, hardware version, software version, and settings of each of the first and second network elements.

11. A method of calibrating a broadband network performance metric from a first broadband network element configured to determine the performance metric in a way that yields a different value of the metric than another way implemented by a different broadband network element, the method comprising:

obtaining network performance data;

determining first values of the network performance metric from the obtained network performance data;

obtaining second values of the network performance metric provided by the first
5 broadband network element, the second values being correlated to the first values; and

deriving a relationship between the first values and the second values of the network performance metric to convert the first values to the second values.

12. The method of claim 11 wherein obtaining the first values comprises
10 measuring characteristics of the network associated with the first network element, the network is a DOCSIS network, and wherein obtaining the second values comprises polling MIB objects of the first network element.

13. The method of claim 12 wherein deriving the relationship comprises curve
15 fitting the first and second values.

14. The method of claim 13 wherein deriving the relationship further comprises determining coefficients of a polynomial describing the second values as a function of the first values.

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15. The method of claim 11 wherein the network performance data are obtained corresponding to a range of first values and second values.

16. The method of claim 11 further comprising injecting test data into at least a portion of the network associated with the network element to affect the network performance data.